Summary of Draft Revised Method for Pesticides and ESA Consultation

The Environmental Protection Agency (EPA) is required under the Endangered Species Act (ESA) and its implementing regulations to determine whether or not a pesticide may affect federally listed threatened and endangered species. EPA conducts pesticide risk assessments, Biological Evaluations (BEs), which are used to initiate consultation with the Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (jointly, the Services). EPA recently proposed some steps to improve those methods. [The proposal does not impact how potential risks to people are evaluated.]

The original method that EPA used to conduct BEs was developed jointly with the Services in 2015, based on recommendations from the National Academy of Sciences, and is called the "interim method". EPA used the interim method to conduct its first nationwide BEs for three pilot chemicals (chlorpyrifos, malathion and diazinon). EPA and the Services intended to revisit and refine the method to address limitations identified through evaluation of the pilot chemicals. The revisions are designed to be: (1) efficient, relying upon automation as much as possible; (2) protective without being overly conservative; (3) transparent; and (4) scientifically defensible, relying on the best available data. EPA is proposing the following improvements to the risk assessment methods:

- **Inclusion of usage data in EPA's risk assessment**. Usage data describe how and where pesticide applicators actually apply a pesticide and how much is being applied over a given area. Without incorporating these data, EPA assumes that a pesticide is applied to all labelled crops at maximum application rates simultaneously.
- **Calculation of the likelihood that a species may be impacted.** Risk assessments are first conducted by assuming that: (1) a species is located on or near a use site at the time the pesticide is applied; (2) species are exposed to concentration of pesticides that represent high-end exposure values; and (3) a species is sensitive to toxic effects of the pesticide. In reality, the location of the species will vary, the amount of pesticide that deposits within a habitat is highly variable, and different species have different sensitivities to pesticides. Therefore, EPA is proposing to use a range of potential exposures, species locations, and sensitivities of relevant species to pesticides to calculate the likelihood that a listed species may be affected.
- **Incorporation of Accuracy and Resolution of Spatial Data.** The first step in conducting the BE is to identify and compare where a pesticide may be used and where species may be located. Only species that may be in a location that could be affected by a pesticide's use would be further evaluated. Where a pesticide may be used is typically identified by satellite imagery, and where species may be located (species range) are provided by the Services. Information describing both where a pesticide may be used and where species are located is imprecise. To address uncertainty in the available information, EPA uses conservative approaches to overestimate potential areas that may be affected at any given place and time. For example, some agricultural use sites may include numerous additional crops that are not labeled for a pesticide to account for uncertainty in the spatial data. EPA projects that the potential for exposure to a species is

highly unlikely when the analysis shows that less than 1% of the potential use sites overlaps with the species ranges.